

A system is described that uses [device > PCS] transformations for a source and destination device along with user preference information to create a composite [device > device] transformation which is used to convert a color in a source space from a source device into a color in a destination space provided to a destination device. The user preference information can be a default or extracted from an image or from the profiles involved or from a GUI. The system modifies the domain of the [device > PCS] transform from a destination device profile through the use of an ink manifold such that there are three input dimensions. The inking manifold can be an identity transform. The system also modifies the range of the [device > PCS] transform from a source device profile such that the PCS coordinates are all within the range of the modified [device > PCS] transform. The modified destination transform is inverted for values in the source transform domain to produce the [device > device] transform. The range of the [device > device] transform can be modified by applying the inking manifold transform to yield coordinates in the range of the destination device.